Utilization of Artificial Ego (AI) in Formula Cars

Tokyo University, M-TEC Co., Ltd., Japan Race Promotion begin joint research on motorsport entertainment-based project



Japan Race Promotion, Inc. (Headquarters: Chiyoda-Ku, Tokyo, President: Yoshihisa Ueno), M-TEC Co., Ltd. (Headquarters: Asaka-Shi, Saitama, President: Tomoyuki Hashimoto), the Mathematical Engineering of Morality Emotions Course at Tokyo University (Project Associate Professor Shunji Mitsuyoshi) are pleased to announce the start of joint research that will use SUPER FORMULA racing for development and testing of new technology, as part of the SF NEXT 50 project. This joint research will utilize artificial ego (AI) in SUPER FORMULA cars to deliver a new kind of entertainment experience for increased enjoyment in motorsport.

The artificial ego system, which is the core of this joint research, uses various data generated while cars are racing. Not only data such as a cars' will to "go faster," but other types of data such as the percentage (index of sense of unity) that fans, drivers and teams are synched together in what is happening in a race will be displayed on screen in real-time. By gathering this type of data, more than just "being fast" or "fighting hard in a race" can be understood. The value on aspects such as "shared emotions," and "how to fight for the support of fans" can be quantified. For example, we can measure which one moved those watching a high-speed race more, a car that has non-emotional-based deep learning equipment on-board, or one that has emotion-based artificial ego (AI) equipped.

Those who have been to a race before, have no doubt watched cars pass in front of them on every lap. In the "metaverse" virtual space that we will create, one can be in the paddock and still be able to enjoy a race, even when cars aren't passing in front of them. Also, through artificial ego (AI), one will be able to get a bird's eye view of the race, enjoy the race from a driver's seat view, and through the use of artificial ego, predict what the next driving conditions will be like. On top of this, in the real-world space, one will be able to experience heart-shaking explosive sounds, and experience overwhelming speed, helping to appeal to the senses. By leveraging the attractiveness that both the virtual and real-world spaces will deliver at circuits, we hope to expand our fan-base and grow the market. By providing increased entertainment through this Japanese-born motorsport research project, we hope to wow the world, and at the same time tap into any commercialization opportunities which may arise.